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DEPARTMENT OF CIVIL ENGINEERING

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JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2020-21/Steel

Date: 06-06-2020

1. TEST REPORT ON REINFORCEMENT STEEL:

Sub: Testing of Reinforcement Steel of diameter 8, 10, 12mm.
{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 01-06-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Technical Reference: IS 1786-2008

TABLE – 1

SL No	Details	For 8 mm		For 10mm		For 12mm	
		Test Results	Min. Req as per IS 1786-2008	**Test Results**	Min. Req as per IS 1786-2008	**Test Results**	Min.Req. as per IS 1786-2008
01	Observed diameter of bar	**8.0mm**	8.0mm	**10.0mm**	10.0mm	**12.0mm**	12.0mm
02	Observed Wt/m Length **Kg/m**	**0.403**	0.363	**0.621**	0.567	**0.892**	0.834
03	Proof stress/Yield stress, fy , **N/mm^2**	**562.0**	500.0	**552.0**	500.0	**558.0**	500.0
04	Bend/ Re bend Test	**Ok**	---	**Ok**	---	**Ok**	---
05	Percentage of Elongation, %	**20.10**	12.00	**21.90**	12.00	**20.50**	12.00
06	Ultimate Tensile Strength **N/mm^2**	**644.0**	545.0	**622.0**	545.0	**638.0**	545.0

*As Furnished by Client.
The Results relate only to the items tested.

AE/AE-12

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6/6/2020

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JNANA BHARATHI
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BUB/CTE/2020-21/CA-

Date: 06-06-2020

TESTING OF COARSE AGGREGATES (20 and 40mm):

Sub: Testing of Aggregates 20 and 40mm.
{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 01-06-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Technical Reference: IS:2386 & IS 383-1970 (Reaffirmed on 2007)

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	*Percentage passing* 20 mm Sample	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
		Single size	Graded
40 mm	100.00	100.00	100.00
20 mm	98.20	85-100	95 - 100
10 mm	42.10	0 - 20	25 - 55
4.75 mm	Nil	0 - 5	0 - 10

TABLE 1. 2 :

IS Sieve Size, mm	Percentage passing 40 mm Sample	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
		Single size	*Graded*
40mm	96.30	85-100	95 – 100
20mm	45.00	0 -20	30- 70
10mm	25.40	0 -5	10- 35
4.75mm	Nil	------	0 - 5

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JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2020-21/MS

Date: 06-06-2020

1. TESTING OF FINE AGGREGATES (ROBO SAND):

Sub: Testing of Robo Sand/M.Sand.
{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 01-06-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Technical Reference: IS:2386 & IS 383-1970 (Reaffirmed on 2007)

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2007) Percentage Passing				Remarks
		Zone-I	Zone-II	Zone -III	Zone -IV	
10.00	**100.00**	100	100	100	100	The Sample Conforms to Grading **Zone-II**
04.75	**94.70**	90-100	90-100	90-100	95-100	
02.36	**87.00**	60-95	75-100	85-100	95-100	
01.18	**74.20**	30-70	55-90	75-100	90-100	
600. mic	**46.00**	15-34	35-59	60-79	80-100	
300.mic	**27.00**	5-20	8-30	12-40	15-50	
150.mic	**8.20**	0-10	0-10	0-10	0-15	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2007)
1.	Specific Gravity	001	**2.63**	----------

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JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2020-21/Cement

Date: 10-06-2020

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 01-06-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

PHYSICAL TESTS ON CEMENT

Brand* : Birla Super
Grade * : 53
Type * : OPC
Date : 02-06-2020 to 09-06-2020

SL No	Name of Test	Results	Requirements as per IS 12269-1987
		Cement Sample	
1	Initial setting time	**154 min**	Shall not be less than 30 min
2	Final setting time	**255 min**	Shall not be more than 600 min
3	Fineness – Specific surface of cement (by Blaine's air permeability method)	**2894 Sq.cm/g**	Shall not be less than 2250 Sq.cm/g
4	Soundness test(by Le-Chatelier's method)	**1.40 mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results) b) 7 days (average of three results)	**29.40 N/ Sq mm** **42.20 N/Sq mm**	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

*As Furnished by Client.
The Results relate only to the items tested.

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JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2020-21/Cube

Date: 17-06-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes for 07 days Compressive Strength
{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 16-06-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Technical Reference: IS: 516

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	09-06-20	16-06-20	07	22500	400	17.78	17.63
	002	"	"	"	"	390	17.33	
	003	"	"	"	"	400	17.78	

* As furnished by Client.
The Results relate only to the items tested.

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JNANA BHARATHI
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BUB/CTE/2020-21/Cube

Date: 08-07-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes for 28 days Compressive Strength
{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 07-07-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Technical Reference: IS: 516

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	09-06-20	07-07-20	28	22500	540	24.00	**23.48**
	002	"	"	"	"	520	23.11	
	003	"	"	"	"	525	23.33	

* As furnished by Client.
The Results relate only to the items tested.

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JNANA BHARATHI
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BUB/CTE/2020-21/Cube

Date: 19-06-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes for 07 days Compressive Strength
{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 18-06-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Technical Reference: IS: 516

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	11-06-20	18-06-20	07	22500	415	18.44	**18.07**
	002	"	"	"	"	410	18.22	
	003	"	"	"	"	395	17.56	

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The Results relate only to the items tested.

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JNANA BHARATHI
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BUB/CTE/2020-21/Cube

Date: 10-07-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes for 28 days Compressive Strength
{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 09-07-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Technical Reference: IS: 516

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	11-06-20	09-07-20	28	22500	520	23.11	23.26
	002	"	"	"	"	515	22.89	
	003	"	"	"	"	535	23.78	

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